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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,334

03/23/2004

Akihiro Ozeki

008312-0308961

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7590

03/06/2008

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

PARSONS, THOMAS H

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

03/06/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/806,334	Applicant(s) OZEKI, AKIHIRO	
	Examiner THOMAS H. PARSONS	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/23/2005; 10/08/2004; 05/12/2004; 03/23/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 7, line 18, suggest changing "HDD 131" to --HDD 13--.

Page 10, line 9, suggest changing "E2PROM 18" to --E2PROM 181--.

Page 15, line 1, suggest changing "LCE" to --LCD--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (6,057,051) in view of Tsutsumi et al. (5,229,222).

Claim 1: Uchida et al. in Figures 1 and 2 disclose an electronic apparatus (1) comprising:
a body (3);

a fuel cell (4) which is built into the body (3);

a first fuel tank (5) which holds fuel for the fuel cell (4) built into the body (3).

Uchida et al. do not disclose a second fuel tank which is removably provided to the body and which holds fuel for the fuel cell. See abstract and col. 5: 54-col. 7: 58.

Tsutsumi et al. in Figures 1, 4-6 and 13 disclose a second fuel tank which is removably provided (i.e. the tank is replaceable) to the body and which holds fuel for the fuel cell. In particular, Tsutsumi et al. disclose that a second tank is connected a first tank, and that the fuel cell system can supply hydrogen gas from the first tank while the second tank is being replaced (col. 8: 6-18). See also col. 6: 10-col. 9: 20, and col. 13: 38-col. 14: 29.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of Uchida et al. by providing the second tank of Tsutsumi et al. because Tsutsumi et al. teach a second tank that would provided a fuel cell system with the capability of generating power smoothly even during the replacement of the hydrogen so as to maintain continuous and steady power generation thereby realizing a safe operation, a higher power generating efficiency and a lower maintenance cost.

Claim 2: Uchida et al. in Figures 1 and 2 an electronic apparatus (1) comprising:
a body (3);
a fuel cell (2) which is housed in the body (3);
a housing unit which is provided in the body and which enables a first fuel tank (5) holding fuel for the fuel cell to be housed in the body (as shown in Figure 2, the fuel tank 5 would obviously be housed in a housing unit). See abstract and col. 5: 54-col. 7: 58.

Uchida et al. do not disclose a connector unit which is provided on the body and which enables a fuel tank unit capable of housing a second fuel tank holding fuel for the fuel cell to be connected to a housing for the body.

Tsutsami et al. in Figures 1, 4-6 and 13 disclose a second fuel tank which removably provided (i.e. the tank is replaceable) to the body and which holds fuel for the fuel cell. In

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particular, Tsutsumi et al. disclose that a second tank is connected a first tank, and that the fuel cell system can supply hydrogen gas from the first tank while the second tank is being replaced (col. 8: 6-18). See also col. 6: 10-col. 9: 20, and col. 13: 38-col. 14: 29. Tsutsumi et al. further disclose a connector unit (44) which is provided on the body which would obviously enable a fuel tank unit capable of housing a second fuel tank holding fuel for the fuel cell to be connected to a housing for the body.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of Uchida et al. by providing the connector of Tsutsumi et al. because Tsutsumi et al. teach a connector that would have provided for the replacement of a second tank second tank so as to provide a fuel cell system with the capability of generating power smoothly even during the replacement of the hydrogen and to maintain continuous and steady power generation thereby realizing a safe operation, a higher power generating efficiency and a lower maintenance cost.

Claim 3: The rejection of claim 3 is as set forth above in claim 2 wherein further Tsutsumi et al. in Figures 1 and 4-6 disclose a liquid supply unit configured to feed the fuel in the second fuel tank (2) to the first fuel tank (5), when the fuel tank unit is installed.

Claim 4: The rejection of claim 4 is as set forth above in claim 2 wherein further Tsutsumi et al. in Figure 13 a liquid supply unit configured to feed the fuel in the second fuel tank (65 or 66) to the fuel cell without letting the fuel pass through the first fuel tank (65 or 66), when the fuel tank unit is installed.

Claim 5: The rejection of claim 5 is as set forth above in claim 2 wherein further Uchida et al. disclose a setting unit (i.e. a controller) configured to set the first fuel tank to supply fuel to

the fuel cell (abstract and col. 3: 8-10 and 20-23. Further, Tsutsumi et al. disclose a setting unit (i.e. controller) configured to set one of the second fuel tank to supply fuel to the fuel cell col. 3: 56-57).

Claim 7: The Uchida et al. combination disclose mounting the fuel tank unit to the body but are silent as to a fuel tank unit installed on a side of the body.

Claim 8: The Uchida et al. combination disclose mounting the fuel tank unit to the body but are silent as to a fuel tank unit installed on a back of the body.

Claim 9: The Uchida et al. combination disclose mounting the fuel tank unit to the body but are silent as to a fuel tank unit installed on an underside of the body.

However, it would have been an obvious matter of design choice to rearrange the position of the fuel tank unit to a back, a side, or an underside as it has been held unpatentable that shifting the position of the fuel tank unit would not have modified the operation of the fuel cell. See MPEP 2144.04, "Rearrangement of Parts".

Claim 10: Uchida et al. in Figures 1 and 2 disclose an electronic apparatus (1) comprising:

a body (3);

a fuel cell (4) which is housed in the body; and,

a housing unit which is provided in the body and which enables a fuel tank holding fuel for the fuel cell to be housed in the body (as shown in Figure 2, the fuel tank 5 would obviously be housed in a housing unit). See abstract and col. 5: 54-col. 7: 58.

Uchida et al. do not disclose a connector unit which is provided on the body and which enables a fuel tank unit capable of housing the fuel tank to be connected to the body.

Tsutsumi et al. in Figures 1, 4-6 and 13 disclose a second fuel tank which removably provided (i.e. the tank is replaceable) to the body and which holds fuel for the fuel cell. In particular, Tsutsumi et al. disclose that a second tank is connected a first tank, and that the fuel cell system can supply hydrogen gas from the first tank while the second tank is being replaced (col. 8: 6-18). See also col. 6: 10-col. 9: 20, and col. 13: 38-col. 14: 29. Tsutsumi et al. further disclose a connector unit (44) which is provided on the body which would obviously enable a fuel tank unit capable of housing a second fuel tank holding fuel for the fuel cell to be connected to a housing for the body.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of Uchida et al. by providing the connector of Tsutsumi et al. because Tsutsumi et al. teach a connector that would have provided for the replacement of a second tank second tank so as to provide a fuel cell system with the capability of generating power smoothly even during the replacement of the hydrogen and to maintain continuous and steady power generation thereby realizing a safe operation, a higher power generating efficiency and a lower maintenance cost.

4. Claim 6, 11 and 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (6,057,051) in view of Tsutsumi et al. (5,229,222) as applied to claim 2 above, and further in view of JP 2002-321682 (hereafter, JP '682).

Uchida et al. and Tsutsumi et al. are as applied, argued, and disclosed above, and incorporated herein.

Claim 6: The Uchida et al. combination does not disclose a display provided on the body; and a display control unit configured to display a state of use of each of the first fuel tank and the second fuel tank.

JP '682 discloses a known display (350 provided on body); and a display control unit (303) configured to display a state of use of the fuel tank (paragraph [0036]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of the Uchida et al. combination by incorporating the display of JP '682 because JP '682 discloses a display the would have provide an indication of the fuel consumption thereby improving the overall control and cost of fuel consumption.

Claim 11: The Uchida et al. combination does not disclose an electronic apparatus further comprising: a first acquisition unit configured to acquire data indicating a state of use of the fuel tank; a second acquisition unit configured to acquire data indicating a state of use of the second fuel tank; and a display control unit configured to display the states of use of the fuel tank and the second fuel tank acquired from the first acquisition unit and the second acquisition unit.

JP '682 discloses a known display (350 provided on body); and a display control unit (303) configured to acquire and display a state of use of fuel tank (paragraph [0036]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of the Uchida et al. combination by incorporating a first acquisition unit configured to acquire data indicating a state of use of the

fuel tank as taught by JP '682; a second acquisition unit configured to acquire data indicating a state of use of the second fuel tank as taught by JP '682; and a display control unit configured to display the states of use of the fuel tank and the second fuel tank acquired from the first acquisition unit and the second acquisition unit as taught by JP '682 because JP '682 discloses as acquisition and display unit that would have provide an indication of the fuel consumption thereby improving the overall control and cost of fuel consumption.

Claim 12: The rejection of claim 12 is as set forth above in claim 11 wherein further 12 JP '682 discloses that the data indicates the amount of fuel in the fuel tank or the second fuel tank and whether or not the fuel tank or the second fuel tank is in use.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutsumi et al. (5,229,222).

Claim 13: Tsutsumi et al. in Figure 13 disclose fuel tank unit (24) comprising:
a connector (44) for connecting with a body housing a fuel cell; and a fuel tank slot capable of accommodating a fuel tank holding fuel for the fuel cell. In particular, Tsutsumi et al. in Figure 13 disclose a fuel cell system comprising two fuel tanks connected to a fuel cell body via a connector. The fuel cell system would obviously provide at least one fuel cell slot.

Further, it would have been an obvious matter of design choice to one of ordinary skill in the art at the time the invention was made to modify the fuel cell system with fuel cell slots, since the Applicant has not disclosed that this particular configuration provides any criticality and/or unexpected results and it appears that the invention would perform equally well with any

tank accommodation such as that taught by Tsutsumi et al.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. in view of Tsutsumi et al, and further in view of JP 2002-321682 (hereafter JP '682).

Claim 14: Uchida et al. in Figures 1 and 2 disclose a method of controlling a power supply for an electronic apparatus comprising an electronic apparatus (1) comprising:

a body (3);

a fuel cell (4) which is built into the body (3);

a first fuel tank (5) which holds fuel for the fuel cell (4) built into the body (3).

Uchida et al. do not disclose a second fuel tank which is removably provided to the body and which holds fuel for the fuel cell. See abstract and col. 5: 54-col. 7: 58.

Tsutsumi et al. in Figures 1, 4-6 and 13 disclose a second fuel tank which is removably provided (i.e. the tank is replaceable) to the body and which holds fuel for the fuel cell. In particular, Tsutsumi et al. disclose that a second tank is connected a first tank, and that the fuel cell system can supply hydrogen gas from the first tank while the second tank is being replaced (col. 8: 6-18). See also col. 6: 10-col. 9: 20, and col. 13: 38-col. 14: 29.

Further Uchida et al. disclose a setting unit (i.e. a controller) configured to set the first fuel tank to supply fuel to the fuel cell (abstract and col. 3: 8-10 and 20-23, and Tsutsumi et al. disclose a setting unit (i.e. controller) configured to set one of the second fuel tank to supply fuel to the fuel cell col. 3: 56-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the electronic apparatus of Uchida et al. by providing the

second tank of Tsutsumi et al. because Tsutsumi et al. teach a second tank that would provided a fuel cell system with the capability of generating power smoothly even during the replacement of the hydrogen so as to maintain continuous and steady power generation thereby realizing a safe operation, a higher power generating efficiency and a lower maintenance cost.

The Uchida et al. combination does not disclose an electronic apparatus further comprising: a first acquisition unit configured to acquire data indicating a state of use of the fuel tank; a second acquisition unit configured to acquire data indicating a state of use of the second fuel tank; and a display control unit configured to display the states of use of the fuel tank and the second fuel tank acquired from the first acquisition unit and the second acquisition unit.

JP '682 discloses a known display (350 provided on body); and a display control unit (303) configured to acquire and display a state of use of fuel tank (paragraph [0036]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of the Uchida et al. combination by incorporating a first acquisition unit acquiring data indicating a state of use of the fuel tank as taught by JP '682; a second acquisition unit acquiring to acquire data indicating a state of use of the second fuel tank as taught by JP '682; and a display control unit displaying the states of use of the fuel tank and the second fuel tank acquired from the first acquisition unit and the second acquisition unit as taught by JP '682 because JP '682 discloses as acquisition and display unit that would have provide an indication of the fuel consumption thereby improving the overall control and cost of fuel consumption.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS H. PARSONS whose telephone number is (571)272-1290. The examiner can normally be reached on M-F (7:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas H Parsons
Examiner
Art Unit 1795

**/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795*